cleanupdate

U.S. Department of Energy/Brookhaven National Laboratory/Brookhaven Science Associates

Environmental Restoration Division — Vol.3/No.2/May 1998

Transition over - or is it?

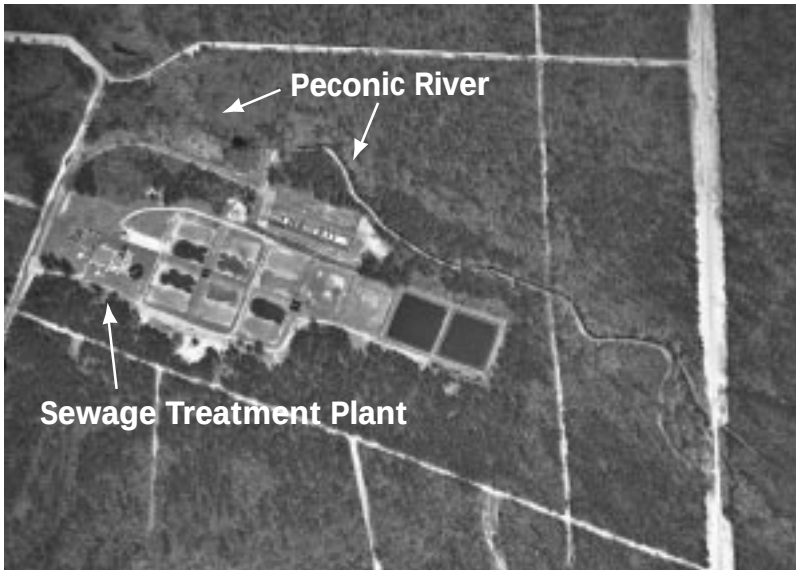
A message from Jim Kannard
Environmental Restoration Division Manager

As reported in the last edition of *cleanupdate*, Brookhaven National Laboratory recently entered a transition period in which responsibility for operation of the Lab was to shift to Brookhaven Science Associates (BSA). The formal transition period has now ended and the transition is complete. Or is it? The real work of transition will continue for many months or, in a few cases, for several years to come.

BSA proposed changes in the way BNL will be managed in the future. DOE awarded the contract to BSA based on the strength of those proposed changes, among other things. However, there was no plan for instantaneous change from one management system to another. That would have invited confusion and disruption at BNL. As we move forward, change will be implemented carefully and in a controlled fashion so that we can all become acclimated as we go. While there remains a lot of anticipation, expectation, and even a little impatience, the chosen path forward will prove the most prudent one.

There is one thing, though, that I am confident will not change, and that is the dedication and commitment of the environmental professionals at BNL. In my short time here, I have been truly impressed with the determination of everyone, from the staff to regulators, interest groups, and the public, to make a real difference for improving the environment at BNL.

While budget resources are not unlimited and the process of obtaining approvals may be rigorous and time consuming, the environmental team never loses its own momentum, nor does it allow these things to detract from continuing to strive to reach established goals. I commit to you my own determination to be a contributor to reach those goals.



An aerial view of the Lab's Sewage Treatment Plant. The Peconic River runs from the top left to bottom right of photo.

Peconic River report due out May 27; public input sought

A report describing the results of an environmental investigation at Brookhaven National Laboratory's (BNL) Sewage Treatment Plant and in the Peconic River area will be available May 27 for public review and comment. The *Operable Unit V Remedial Investigation/Risk Assessment Report* (OU V RI/RA) also examines potential risks to human health and the environment in the absence of cleanup. The public comment period is open until July 27, 1998.

OU V is the formal designation for an area in the eastern-central portion of BNL that includes BNL's Sewage Treatment Plant, which is used to process Lab sewage. The Sewage Treatment Plant discharges approximately 800,000 gallons of treated water per day into the headwaters of the Peconic River, on BNL property north of the plant. The plant includes several processing buildings, a settling tank, six active sand

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updates

Independent sampling complete

Later this spring, the Suffolk County Department of Health Services is expected to release a report on the independent sampling of the Peconic River conducted last fall. Brookhaven National Laboratory (BNL) and the U.S. Department of Energy participated in the river sampling program with the County and a Shelter Island environmental group, Fish Unlimited.

The project began in October, with sediment, surface water and plant samples collected and split three ways among the groups. Five different New York State-approved laboratories analyzed the samples, and results are now being tabulated by the County.

After the results are tabulated, Suffolk County will issue a report that compares the new results to those previously reported by BNL. Results from the earlier sampling of this area can be found in the *Operable Unit V Remedial Investigation/Risk Assessment Report*, available May 27 for public review and comment in the Lab's four information repositories (see story, page 1). ■

New division, names, and faces

Along with the more visible changes associated with Brookhaven Science Associates taking over the management and operation of BNL, the Office of Environmental Restoration (OER) has undergone several changes of its own since the last issue of *cleanupdate*. The group's name has been changed to the Environmental Restoration Division (ERD), and key personnel have been added in several areas to help make our team even stronger. The new additions include:

- Jim Kannard, Division Manager

Jim comes to ERD from Bechtel National, Inc., BSA's primary subcontractor overseeing the restoration program. Before arriving at BNL, Jim was Vice President and Assistant General Manager for Environmental Management at the U.S. Department of Energy's Nevada Test Site. Jim will oversee the day-to-day operations of ERD and coordinate the direction of the cleanup mission with the U.S. Department of Energy.

- Eloise Gmur, Community Relations Supervisor

ERD's community relations group is now managed by the Public Affairs and Community Involvement Division. Eloise comes to her new role in community relations after 15 years on the staff of the museum and tour office. She will help direct the Lab's Superfund community outreach program, coordinating outreach activities for several major projects and upcoming public meetings, as well as managing day-to-day interactions with the public.

- Anthony Graves, Community Relations Coordinator

The newest member of the community relations team comes to the Lab after eight years in local town environmental programs. Anthony will assist in implementing the initiatives of the Superfund community outreach program. ■

hookupdate

An update from the U.S. Department of Energy

The U.S. Department of Energy is nearing the end of its public water hookup project.

Contractors have completed all water main installations, and every property owner that applied for a hookup has been connected to the main. However, several property owners who are eligible for a free hookup have not yet submitted an application to the water authority. Anyone who is eligible, but has not yet applied, should contact the Suffolk County Water Authority as soon as possible to obtain an application.

Restoration of landscaping and roads in the area is expected to be completed soon. Once this work is done, DOE will consider the project to be finished and there will be little, if any, opportunity for DOE to provide additional hookups. DOE, the Suffolk County Department of Health Services, and the Agency for Toxic Substances and Disease Registry have recommended that residents in these areas accept DOE's hookup offer to prevent the possibility of any potential future exposure to contaminated groundwater. ■

cleanupdate A newsletter from the Environmental Restoration Division (www.oer.dir.bnl.gov) at Brookhaven National Laboratory, *cleanupdate* is part of an on-going effort to inform people about environmental restoration issues and activities at the Lab. If you would like to be on the Environmental Restoration Division mailing list, or if you have any questions about the cleanup, please contact:

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Division Manager
516-344-5588 (kannard@bnl.gov)

Eloise Gmur or Peter Genzer
Community Relations
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A 1997 aerial photo of BNL's new, state-of-the-art Waste Management Facility (WMF), located in the northeastern portion of the Lab site. At the bottom of the photo is the Resource Conservation and Recovery Act building, which handles hazardous and chemical wastes. The top building is used for collecting, sorting, packaging and storing the Lab's radioactive waste prior to off-site disposal. The central building houses offices for WMF employees.

New waste management facility opens; cleanup of old facility due to begin in 2000

A new, state-of-the-art Waste Management Facility (WMF) opened at Brookhaven National Laboratory (BNL) last December. This $13-million, 55,000-square-foot facility was built with advanced environmental protection systems to enable BNL to handle its waste in a manner that is even more protective of the environment. The WMF is in full compliance with Suffolk County's groundwater protection statutes, some of the most stringent in the nation.

The WMF replaces BNL's 50-year-old waste management facility. Due to past practices, the old facility (the Hazardous Waste Management Facility) contains localized soil contamination and is a known source of groundwater contamination. The soil contamination will be addressed under the Superfund environmental cleanup program being conducted at BNL by the Environmental Restoration Division. Groundwater contamination is already being addressed by a pump-and-treat system at the Lab's south boundary. Remediation of the old waste management facility is expected to begin in 2000, following public comment periods and a public meeting.

The new facility utilizes technologies to prevent potential environmental impacts from spills and any other accidental releases of hazardous material. Protective features and technologies include spill-diversion and hold-up capability, secondary containment, radiation shielding, sub-floor impermeable membranes, fire protection, and filtered ventilation. The new facility was built by J. Kokolakis Contracting, Inc. of Rocky Point. It is located on 18 acres within a controlled-access security fence.

The WMF is operated by BNL's Waste Management Division, which collects, sorts, stores and packages all of BNL's chemical and radioactive hazardous waste before it is shipped for off-site disposal. These operations are carried out in accordance with all local, state and federal guidelines. ■

Soils at the Lab's former Waste Management Facility and in other areas around the site are expected to be remediated beginning in 2000.

Volatile organic compounds (VOCs): historical use leads to water concern

Many common home and office products contain volatile organic compounds (VOCs). These chemicals are found in solvents, strippers, paints and wood finishes, correction fluid, invisible tape and even rubber bands. VOCs are also commonly used in nail polishes and hardeners,and in the production of many fabrics, glues and perfumes. They are contained in fuel oil, and gasoline itself is a VOC.

A major target of environmental restoration and waste reduction efforts at Brookhaven National Laboratory (BNL) is the group of chemicals known as volatile organic compounds (VOCs). Historical and widespread use of these chemicals in government, industry and the home has left a challenging legacy of groundwater contamination at BNL and many other locations.

VOCs are chemicals that evaporate (or volatilize) when they are exposed to air. They are called organic because they contain carbon. These chemicals are used in the manufacture of, or are present in, many products used daily in both homes and businesses. Some products, like gasoline, actually are VOCs.

VOCs are used as fuels (gasoline and heating oil) and are components of many common household items like polishes, cosmetics, perfumes and cleansers. They are also used in industry and government as degreasers and solvents, and in dry cleaning. VOCs are present in many fabrics and furnishings, construction materials, adhesives and paints. In offices, VOCs can be found in correction fluid, magic markers, paper, rubber bands, invisible tape and other products.

The names of many VOCs may be familiar: carbon tetrachloride, trichloroethene (TCE), tetrachloroethene (PCE), trichloroethane (TCA), benzene and toluene. Because of their widespread historical use, and past lack of stringent disposal requirements, they are in our air, soil, and water in varying concentrations.

Regulatory requirements

Federal regulation of industrial and government VOC use and disposal began with the formation of the U.S. Environmental Protection Agency in the early 1970s. Until that time, people had limited specific knowledge about these chemicals and their potentially toxic effects. Chemicals were poured into sinks and toilets, directly onto the ground or into cesspools and sewers.

After testing found that VOCs could sometimes linger in the environment for years, federal and state agencies began to pass laws that set limits for disposal. These limits are based on extensive studies that provide information about each chemical and its effects on humans, animals, and the environment.

However, by the time these studies were completed and regulatory limits were set, large amounts of these VOCs had already been released to the environment.

VOCs and groundwater

Over the years, products containing VOCs have been spilled on the ground or disposed of in ways that have caused them to enter the groundwater directly (i.e., through cesspools, septic systems, drywells and landfills). VOCs spilled or dumped on the ground (e.g., when a lawnmower's gas tank is overfilled) evaporate to some extent, but they also are absorbed by the soil.

Rain or snow can then carry the VOCs deeper into the ground, where they eventually reach the groundwater.

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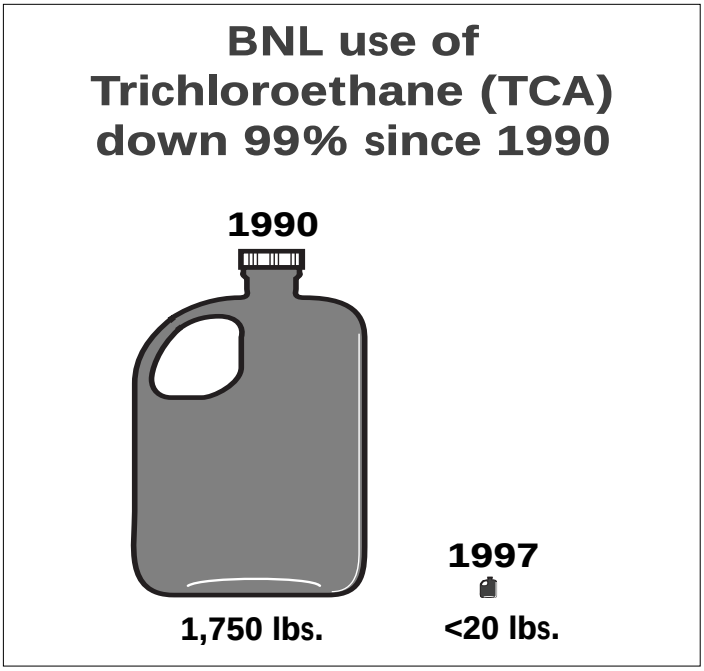
The VOCs do not volatize in the groundwater because of the lack of air movement. As a result, they will remain in the groundwater until removed by the natural processes of decay, dilution and biodegradation. Once they are in the groundwater, the VOCs migrate with the groundwater and can potentially enter drinking water wells.

VOCs and BNL

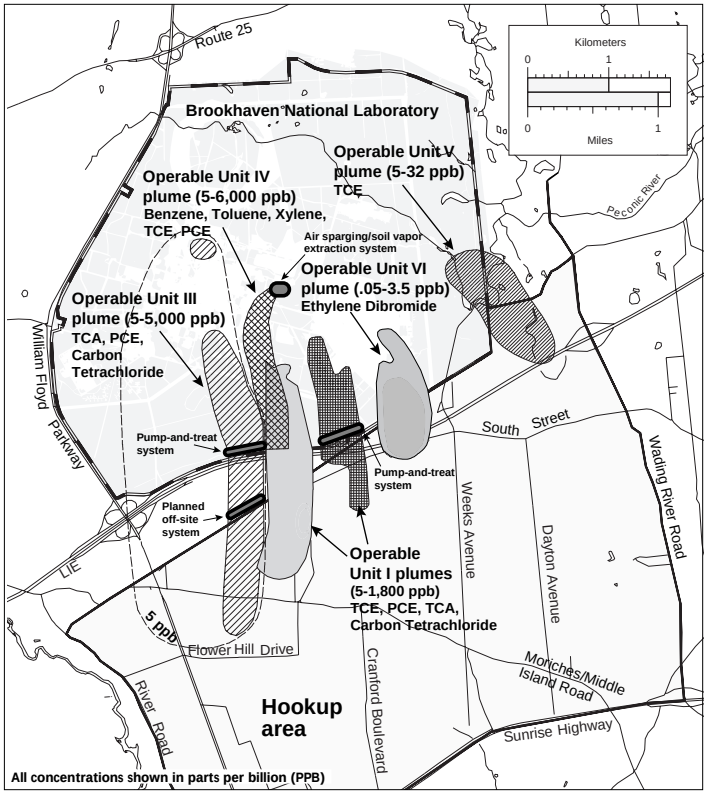
VOCs have been used as solvents and degreasers at the BNL site since it was the U.S. Army's Camp Upton. Past disposal practices at the Laboratory site have led to the formation of several "plumes," or areas of groundwater contamination, some of which extend beyond the Lab's boundaries (see illustration, right). BNL is actively treating these plumes to prevent further off-site movement of these chemicals and to clean the sole-source aquifer.

While BNL is cleaning up the legacy of past VOC use, it is also looking to prevent future contamination of the environment. The Lab is working to reduce the amount of VOCs and other hazardous materials used at the site through its expanding pollution prevention and waste reduction programs (see illustration, below). Over the past three years, such efforts have cut the amount of hazardous waste produced at the Laboratory in half.

As part of these programs, potential sources of contaminants at the Lab are being identified and removed or replaced. Solvents and degreasers that are safer for the environment are being selected and used in ways that minimize their potential for environmental release, and volume reduction and decontamination techniques are being employed to reduce the quantity of waste requiring disposal by BNL.



The Lab's pollution prevention program has significantly reduced the amounts of VOCs used on-site over the past several years.



The Lab has documented six distinct VOC groundwater plumes, several of which extend beyond the site boundary. Three cleanup systems are currently treating these plumes, and construction of a fourth will begin this summer.

Remediating groundwater

Several technologies are available to reduce the concentrations of VOCs in groundwater. One of the most effective of these technologies is air stripping. It involves mixing air with the contaminated groundwater, which "strips," or removes, the VOCs from the water. The clean water is then returned to the ground. The air carrying the VOCs (now in gaseous form) is released into the atmosphere, at levels below regulatory limits, or treated further. Another common technology involves using carbon filters to remove VOCs from the groundwater.

These technologies are successfully used at many sites throughout the world to clean up VOC-contaminated groundwater. They are also used as a common form of treatment for public water supply wells. BNL is currently using three similar systems to treat on-site groundwater. Construction of a fourth system in an off-site area just south of the Lab will begin this summer (see the January 1998 issue for more information).

VOCs and health

Researchers have extensively studied the effects of most common VOCs on animals and humans. Federal and state regulatory agencies use the results of these studies, such as those performed by the Agency for Toxic Substances and Disease Registry (ATSDR), to determine health advisory levels and set limits on the amount of each VOC that is considered safe for human exposure.

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The Superfund Process at BNL

This updated diagram shows Brookhaven National Laboratory's progress through the many steps of the Superfund cleanup. One chart is for "removal actions" (right) and the other for "operable units" (below).

The Lab's cleanup is organized into six administrative segments, each representing a geographic area of the Lab site . The soil and groundwater in the "operable units" are investigated to see if past Lab practices have left contamination with the potential to impact human health and/or the environment. If contamination is found, BNL's Environmental Restoration Division works with the federal, state and local officials, and the public, to determine the appropriate cleanup remedy.

A "removal action" occurs if contamination is found that could pose a threat to public health or the environment. The action is taken as quickly as possible to eliminate the potential threat. Five removal actions are complete and two are close to completion.

In the cleanup process, completion of a given step usually means the issuance of a major report. These reports are listed in quotation marks across the top section. Below are the actual or anticipated dates when regulators release these reports to the public. Future dates are scheduled in the "Schedules Document," which proposes the timetable for each operable unit and removal action.

These schedules, approved by the U.S. Department of Energy, the U.S. Environmental Protection Agency and the New York State Department of Environmental Conservation, are updated at least annually and may change based on the time needed to review and finalize draft reports. Also listed above the columns are the cleanup-related activities that do not result in major reports—sampling, analysis and evaluation of data and public participation—but play major roles in the cleanup process.

The completed reports listed here, as well as the Schedules Document, are available for public review as part of the "Administrative Record" of the BNL cleanup. Complete sets of the Administrative Record are available at the Lab's four information respositories (for locations, see page 8). Document summaries, meeting schedules and other public participation information can be also be found at the ERD web site (www.oer.dir.bnl.gov).

REMOVAL ACTIONS

Field work and evaluation; On-going

	Investigation/Study: "Work Plan" "Health & Safety Plan" "Sampling & Analysis Plan"	Investigation/Study: Field investigation, sampling & analysis data	Investigation/Study: "Engineering Evaluation/ Cost Analysis"	Investigation/Study: Public participation, press releases, public notices, information meetings	Decision: "Action Memorandum" (Includes comments & responses in "Responsiveness Summary")	Design: Design phase of Remedial Action	Cleanup: Begin actual cleanup	Closure: "Closeout Report"
Removal Action I D Tanks	completed 7/91		completed 7/93		completed 9/93	completed 8/94	8/94	12/95 DONE
Removal Action II 12 Underground storage tanks	completed 7/94		N/A		N/A	completed 3/95	7/95	4/96 DONE
Removal Action III Cesspools	completed 7/91		completed 2/94		completed 3/94	completed 4/94	7/95	**5/98***
Removal Action IV Bldg. 479 PCB soil remediation	completed 1/92		N/A		N/A	N/A	5/92	3/93 DONE Immediate removal action
Removal Action V OU I Groundwater removal	completed 9/92		completed 12/95		completed 12/96	completed 5/96	5/96 Initiated public water hook-up 12/96 Initiated ground-water cleanup	12/96 DONE
Removal Action VI 1. Current landfill 2. Former landfill 3. Glass holes	completed 10/93		completed 4/95 Current & Former landfill closure completed 4/97 "Evaluation of Alternatives Report for Glass Holes"		1. completed 12/94 2. completed 7/95 3. completed 5/97	completed 7/94 completed 8/95 completed 11/96	5/95 5/96 5/97	6/96 DONE 3/97 DONE **5/98***
Removal Action VII Bldg. 464 Mercury soil remediation	completed 7/94		N/A		completed 2/95	N/A	7/94	2/95 DONE Immediate removal action

OPERABLE UNITS

Field work and evaluation; Alternative methods of cleanup examined; On-going

	Investigation/Study: "Scope of Work"	Investigation/Study: "Remedial Investigation/ Feasibility Study/Work Plan" (Include "Sampling & Analysis Plan" "Health & Safety Plan")	Investigation/Study: Remedial Investigation (Field work)	Investigation/Study: "Remedial Investigation/ Risk Assessment Report"	Investigation/Study: Feasibility Study	Decision: "Feasibility Study Report" & "Proposed Plan"	Decision: Public participation, press releases, public notices, information meetings	Decision: Public meeting	Decision: Record of public comments & responses in "Responsiveness Summary" (Included In ROD)	Decision: "Record of Decision" (ROD)	Design: Begin design phase of remedial action	Action: Begin actual cleanup
Operable Unit I Hazardous Waste Management Facility and site-wide radiologically contaminated soils	completed 2/92	completed 10/93 OU I 7/94 OU VI		completed 7/96		**Summer/Fall 98***		**12/98***	**1/99***	**2/99***	**Spring 99***	**Spring 00***
Operable Unit II Waste Concentration Facility, AGS scrap yards, former Low-Mass Criticality Facility, contaminated landscape soils	completed 12/94	completed 1/96		**10/98***		Evaluation of alternatives and cleanup transferred to OU I (To allow for a consolidated effort to clean up all site-wide radiologically contaminated soils.)						
Operable Unit III HFBR Tritium Potable/supply wells, spills, sewer pipes (in the central area)	completed 3/93	completed 10/94		**Summer 98*** Incorporates additional work on HFBR Tritium Plume		**Fall/Winter 98***		**Winter 99***	**Winter 99***	**Winter 99***	**Spring 99***	**12/99*** (Final remedy) Interim groundwater cleanup operational 6/97
Operable Unit IV Central Steam Facility, Reclamation Facility	completed 9/90	completed 12/91		completed 11/94 completed 11/95 addendum		completed 11/95		completed 12/95	completed 3/96	completed 3/96	5/97	11/97 DONE Interim soil cleanup completed 1994
Operable Unit V Contamination related to Sewage Treatment Plant	completed 8/92	completed 3/94		May 98 Incorporates additional sampling/study of Peconic River		**Summer 98***		**Summer/Fall 98***	**Fall 98***	**Fall 98***	**Winter 99***	**Summer 00*** Imhoff tanks cleanup completed early 1996
Operable Unit VI Ethylene dibromide (EDB) groundwater contamination	included with OU I			Included with OU I		completed 10/96 "Focused" Feasibility Study		completed 11/96	**Fall 98***	**Fall 98***	Spring 98	8/96 DONE Public water hookups completed

*** Anticipated dates**

VOCs...

(continued from page 5)

Health advisory levels are based on a "no-effect level." The no-effect level is the maximum VOC dose that does not produce a known toxic effect in experiments and is further reduced by an additional safety factor.

The limits for each chemical are set by the U.S. Environmental Protection Agency (EPA), as well as the individual states. These agencies have established a maximum contaminant level (MCL) for each VOC. If water contains less than the MCL of the chemical, the water is considered safe for drinking. Local government agencies may also set their own drinking water standards; these are usually more stringent than the EPA's standards.

While the health effects of low-level exposure to VOCs are not known, studies have shown that exposure to, or ingestion of, VOCs in high concentrations can cause various health effects, including cancer.

Preventing exposure to VOCs is the best way to avoid the possibility of adverse health effects. Since 1996, the DOE has connected more than 1,500 BNL-area homes and businesses to the public water supply as a precautionary measure. The Suffolk County Water Authority samples and analyzes its water on a regular basis to ensure that it meets all guidelines established for potable supply wells.

Awareness is key

Government facilities like BNL, business owners and residents can help to prevent future VOC contamination of the groundwater by ensuring that dirty or spent solvents or paint thinners are properly disposed. Pouring them on the ground or down the drain contributes to groundwater contamination. Underground fuel and oil tanks should be checked for leakage.

BNL, meanwhile, will continue to clean up remaining groundwater contamination while further reducing the use of these chemicals in day-to-day operations. New initiatives, like the Lab's recent decision to participate in the Town of Brookhaven's recycling program, will also help to minimize the Lab's impact on the environment. ■

Libraries and cleanup documents

All reports from BNL's Environmental Restoration Division are available at:

Longwood Public Library
800 Middle Country Road
Middle Island NY 11953
516-924-6400
e-mail:
helpdesk@suffolk.lib.ny.us

Mastics-Moriches-Shirley Community Library
301 William Floyd Parkway
Shirley NY 11967
516-399-1511
www.li.net/~mmscl

BNL Research Library
Building 477A
Brookhaven Avenue
Upton NY 11973
516-344-3483
http://www.bnl.gov

U.S. EPA Region II Library
Administrative Records Room
290 Broadway
New York NY 10007-1866
212-637-4296

What's new in the libraries:

- ***Operable Unit V Remedial Investigation/Risk Assessment Report***
  (Indexed as BNL/OU5/10.7/ in the Administrative Record)
  The public comment period on this document runs from May 27 to July 27, 1998

- ***Removal Action 6 Interim Landfill Closure Construction Certification Report***
  (Indexed as BNL/RA6/8.8/1227-1423 in the Administrative Record)

- ***Pre-Design Report for Operable Unit III Off-Site Removal Action***
  (Indexed as BNL/OU3/11.4/428-554 in the Administrative Record)

- ***Agency for Toxic Substances and Disease Registry Draft Groundwater Health Consultation and Addendum***
  (Indexed as BNL/GEN/4.1/1-33 in the Administrative Record)

- ***Accelerating Cleanup: Paths to Closure***
  (see reference librarian for a copy)

Peconic River...

(continued from page 1)

filter beds, and two storage ponds. The investigation looked at soil, sediment, surface water and groundwater in the study area.

In 1997, the Sewage Treatment Plant was significantly upgraded. The new design employs two aeration tanks to reduce the amounts of nitrogen and organic matter discharged from the plant. It also includes ultraviolet disinfection of the effluent before it is discharged into the Peconic River.

Investigation results

The remedial investigation, conducted between 1995 and 1997, found elevated levels of heavy metals (e.g., mercury and silver) and low levels of radionuclides, including cesium-137, in soils at the Sewage Treatment Plant. Downstream of the plant's discharge area, polychlorinated biphenyls (PCBs), radionuclides and heavy metals, including mercury and silver, were detected in river sediment.

The investigation also found volatile organic compounds, including trichloroethene (TCE), and low levels of tritium (a radionuclide) in groundwater in the southeastern portion of OU V and in off-site areas east and southeast of BNL.

TCE was commonly used in industry and at the Lab as a degreasing agent to remove oil and other petroleum products from metal parts and machinery. The highest concentration of TCE detected during the investigation was 32 parts per billion (ppb) in an on-site monitoring well near the Lab's eastern boundary. The drinking water standard for TCE is 5 ppb.

The highest tritium concentrations detected were approximately one-tenth of the drinking water standard of 20,000 picocuries per liter. Area home and business owners have been provided with connections to the public water supply.

Risks assessed

The risk assessment conducted for OU V estimated potential risks to human health and the environment. Risks evaluated in the report included radiological, chemical and ecological risks (i.e., risks to wildlife and the environment). Radiological and chemical risks were evaluated for both current and future land use scenarios.

The current-use scenario was for on-site workers and trespassers. The future-use scenario evaluated risk for hypothetical residents, 50 years in the future, living on BNL property, using groundwater as a potable water source and consuming homegrown fruits and vegetables, fish, and game (deer meat), as significant portions of their diet. No radiological health risks were found above the EPA's carcinogenic risk criteria of 1 in 10,000. In other words, the amount of added risk above the average one-in-four chance that U.S. residents have of getting cancer would be less than 1 in 10,000 for these hypothetical future residents.

The only chemical risk that exceeded EPA criteria involved the hypothetical future residents drinking area groundwater (homes in this area have already been connected to the public water supply).

The ecological risk assessment determined that fish in the on-site headwaters of the Peconic River showed a bioaccumulation of PCBs and mercury that could pose a hazard to wildlife preying solely on these fish. Because the on-site waters are unfishable and the fish are too small for human consumption, on-site fish do not pose a hazard to human health. Water-flow patterns (the riverbed is dry at the site boundary for much of the year) and barriers limit the off-site migration of fish. Contaminant concentrations in off-site fish are well below levels that would pose a hazard to human health.

Cleanup plan forthcoming

Remediation alternatives for OU V will be compared and evaluated in the Operable Unit V Feasibility Study and the Operable Unit V Proposed Plan, which will be available later this year. After these documents are released, the U.S. Department of Energy and BNL will be seeking public input on the remediation alternatives during public comment periods, information sessions, and a public meeting.

For more information, see the Operable Unit V Remedial Investigation/Risk Assessment Report (indexed as BNL/OU5/10.7/), available for review May 27 at the Lab's four information repositories (for locations, see page 8). ■

Remediation alternatives being considered for Peconic River sediments include:

- ***No action*** (required by law to be evaluated)
- ***Source removal*** (dredging of river sediments)
- ***Phytoremediation*** (use of plants or bacteria to naturally remove contamination)

Alternatives will be compared in the Feasibility Study and the Proposed Plan, which are expected to be released later in 1998. These reports will explain remediation alternatives and document the comparison of those alternatives to nine U.S. Environmental Protection Agency criteria, which help determine the best option.

The proposed plan will also document the alternative believed to be most protective of human health and the environment.

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U.S. Environmental Protection Agency

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212-637-4321
e-mail: logan.mary@epamail.epa.gov

New York State Department of Environmental Conservation

Jim Lister
Environmental Engineer
518-457-3976

For more information about public and environmental health, call:

U.S. Agency for Toxic Substances and Disease Registry
(404) 639-6000
http://atsdr1.atsdr.cdc.gov:8080

New York State Department of Health
Center for Environmental Health
(800) 458-1158, Extension 402, or
(518) 458-6402

N.Y. State Dept. of Environmental Conservation
(800) 342-9296

Suffolk County Department of Health Services
Division of Environmental Health Services
(516) 853-3081
Division of Public Health
(516) 853-3057

Information and Hotlines- Telephone numbers, e-mail addresses, www sites

Brookhaven National Laboratory

Brookhaven National Laboratory
516-344-2123
www.bnl.gov

Environmental Restoration Division
516-344-2818
www.oer.dir.bnl.gov

Environment, Safety and Health Services Division
516-344-4207
www.sep.bnl.gov

U.S. Department of Energy

DOE-Brookhaven Group
516-344-3444
www.doe.bnl.gov

Environmental Information Center
(800) 736-3282
http://www.em.doe.gov

Public Information Center
(201) 843-7466
www.fusrap.doe.gov

Inspector General Hotline
(800) 541-1625

National Environmental Policy Act
Information Hotline
(800) 626-2756

Nuclear Safety Hotline
(800) 626-6376

U.S. Environmental Protection Agency

EPA Homepage
www.epa.gov

Public Information Center
(202) 260-2080
e-mail:
publicaccess@epamail.epa.gov

ORD Research Information
(513) 569-7562
www.epa.gov/docs/ORD

RCRA, Superfund and Underground Storage Tanks Hotline
(800) 424-9346
www.epa.gov/epaoswer/hotline

Hazardous Waste Ombudsman
(800) 262-7937

Groundwater
(202) 260-7786

Drinking Water
(800) 426-4791
www.epa.gov/OW

Pesticides
(800) 858-7378
http://ace.orst.edu/info/ntpl

Toxic Substances and Asbestos Information
(202) 554-1404

Pollution Prevention Clearinghouse
(202) 260-1023
http://es.incl.gov

Environmental Justice
(800) 962-6215

Emergency Planning & Community Right-to-Know
(800) 535-0202
www.epa.gov/epaoswer/hotline

Environmental Education
(202) 260-4962

Air Risk Hotline
(919) 541-0888

Solid Waste Information Clearinghouse
(800) 677-9424

Transporting Hazardous Materials
(800) 752-6367

Wastewater
(800) 624-8301

Wetlands
(800) 832-7828
e-mail:
wetalnds-hotline@epamail.epa.gov

Office of Water Homepage
http://www.epa.gov/owow

U.S. Geological Survey

National Water Quality Assessment Program
http://www.rvares.er.usgs.gov/nawqa/NAWQA.OFR94-70

BNL Community Advisory Council formed to provide input to new Lab management

On April 21, Brookhaven National Laboratory (BNL) and the U.S. Department of Energy (DOE) announced plans for the formation of a community advisory council to provide input directly to Laboratory management.

The community-based Council is meant to ensure that the ideas, interests, and concerns of the laboratory's neighboring communities are considered and addressed by the Laboratory in its decision-making processes.

The Council will provide advice to Brookhaven Science Associates, the management and operating contractor of the Laboratory, and create a new communication channel through which the Laboratory and DOE can listen and respond to the ideas and concerns of the community.

The Council is being established at the request of the community, following several DOE-sponsored discussions, studies, surveys and workshops conducted since mid-1997, as well as a recent survey conducted by a community-based Exploration Committee.

The Brookhaven Executive Round Table (BER), a forum for communication and integration of information and activities related to BNL, is assisting the Laboratory to formulate the draft Council Charter and identify diversified membership. Council membership will be discussed and decided upon by the BER at its May 26 meeting.

The BER consists of Laboratory regulators and representatives of other federal, state, and local government organizations as well as DOE and BNL management. The BER will develop a charter and identify Council membership within the broad range of community interests.

According to the draft charter, which will be finalized by the Council, the council's membership will include representatives from groups including civics , local government, business, education, environmental, activists, health, senior citizen, labor, emergency response, BNL users and employees.

For more information, contact Kathy Geiger at 344-3129. ■

Remediation roundup

The Laboratory currently has four treatment systems operating 24 hours a day to clean up soil and groundwater on the site. Beginning in this issue, we will include an update on the total amounts of groundwater treated by each system and the amount of contaminants removed from the sole-source aquifer.

- ***Removal Action V Pump-and-Treat System*** **(operating since 12/96):**
  - **440,000,000 gallons of groundwater treated by air stripper and recharged**
  - **135 pounds of volatile organic compounds (VOCs) removed from the aquifer**

- ***Operable Unit III Pump-and-Treat System*** **(operating since 6/97):**
  - **248,000,000 gallons of groundwater treated by air stripper and recharged**
  - **450 pounds of VOCs removed from the aquifer**

- ***Tritium Remediation System*** **(operating since 5/97)**
  - **63,000,000 gallons of water treated by carbon filters (to remove VOCs) and recharged**
  - **Further southward movement of High Flux Beam Reactor tritium plume curtailed**

- ***Operable Unit IV Air Sparging/Soil Vapor Extraction System*** **(operating since 11/97)**
  - **1,300,000,000 cubic feet of air treated to remove remnants of 1977 oil spill from area soil and groundwater**
  - **12 pounds of contaminants removed from the soils and aquifer**